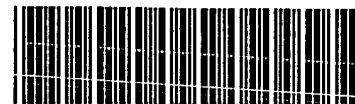# RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/520,220

Source: PCT

Date Processed by STIC: 1-13-05

# *ENTERED*

PCT

RAW SEQUENCE LISTING          DATE: 01/13/2005
PATENT APPLICATION: US/10/520,220     TIME: 17:13:29

Input Set : A:\seqlist.txt
Output Set: N:\CRF4\01132005\J520220.raw

```
 3 <110> APPLICANT: Yocum , R. Rogers
 4        Patterson, Thomas A.
 5        Pero, Janice G.
 6        Hermann, Theron
 8 <120> TITLE OF INVENTION: MICROORGANISMS AND PROCESSES FOR ENHANCED PRODUCTION OF
 9        PANTOTHENATE
11 <130> FILE REFERENCE: BGI-154US2
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/520,220
C--> 13 <141> CURRENT FILING DATE: 2005-01-03
13 <150> PRIOR APPLICATION NUMBER: PCT/US2003/021305
14 <151> PRIOR FILING DATE: 2003-07-03
16 <150> PRIOR APPLICATION NUMBER: 60/393826
17 <151> PRIOR FILING DATE: 2002-07-02
19 <160> NUMBER OF SEQ ID NOS: 31
21 <170> SOFTWARE: PatentIn Ver. 2.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 194
25 <212> TYPE: DNA
26 <213> ORGANISM: Artificial Sequence
28 <220> FEATURE:
29 <223> OTHER INFORMATION: Description of Artificial Sequence:promoter
30        sequence
32 <220> FEATURE:
33 <221> NAME/KEY: -35_signal
34 <222> LOCATION: (136)..(141)
36 <220> FEATURE:
37 <221> NAME/KEY: -10_signal
38 <222> LOCATION: (159)..(164)
40 <400> SEQUENCE: 1
41 gctattgacg acagctatgg ttcactgtcc accaaccaaa actgtgctca gtaccgccaa 60
42 tatttctccc ttgaggggta caaagaggtg tccctagaag agatccacgc tgtgtaaaaa 120
43 ttttacaaaa aggtattgac tttccctaca gggtgtgtaa taatttaatt acaggcgggg 180
44 gcaacccgc ctgt                                                    194
47 <210> SEQ ID NO: 2
48 <211> LENGTH: 163
49 <212> TYPE: DNA
50 <213> ORGANISM: Artificial Sequence
52 <220> FEATURE:
53 <223> OTHER INFORMATION: Description of Artificial Sequence:promoter
54        sequence
56 <220> FEATURE:
57 <221> NAME/KEY: -35_signal
58 <222> LOCATION: (113)..(118)
```

Input Set : **A:\seqlist.txt**
Output Set: **N:\CRF4\01132005\J520220.raw**

```
60  <220> FEATURE:
61  <221> NAME/KEY: -10_signal
62  <222> LOCATION: (136)..(141)
66  <400> SEQUENCE: 2
67  gcctacctag cttccaagaa agatatccta acagcacaag agcggaaaga tgttttgttc 60
68  tacatccaga acaacctctg ctaaaattcc tgaaaaattt tgcaaaaagt tgttgacttt 120
69  atctacaagg tgtggtataa taatcttaac aacagcagga cgc            163
72  <210> SEQ ID NO: 3
73  <211> LENGTH: 127
74  <212> TYPE: DNA
75  <213> ORGANISM: Artificial Sequence
77  <220> FEATURE:
78  <223> OTHER INFORMATION: Description of Artificial Sequence:promoter
79        sequence
81  <220> FEATURE:
82  <221> NAME/KEY: -35_signal
83  <222> LOCATION: (34)..(39)
85  <220> FEATURE:
86  <221> NAME/KEY: -10_signal
87  <222> LOCATION: (58)..(63)
89  <220> FEATURE:
90  <221> NAME/KEY: -35_signal
91  <222> LOCATION: (75)..(80)
93  <220> FEATURE:
94  <221> NAME/KEY: -10_signal
95  <222> LOCATION: (98)..(103)
97  <400> SEQUENCE: 3
98  gaggaatcat agaattttgt caaaataatt ttattgacaa cgtcttatta acgttgatat 60
99  aatttaaatt ttatttgaca aaaatgggct cgtgttgtac aataaatgta gtgaggtgga 120
100 tgcaatg                                                   127
103 <210> SEQ ID NO: 4
104 <211> LENGTH: 24
105 <212> TYPE: DNA
106 <213> ORGANISM: Artificial Sequence
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
110        binding site
112 <400> SEQUENCE: 4
113 taaacatgag gaggagaaaa catg                                 24
115 <210> SEQ ID NO: 5
116 <211> LENGTH: 28
117 <212> TYPE: DNA
118 <213> ORGANISM: Artificial Sequence
120 <220> FEATURE:
121 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
122        binding site
124 <400> SEQUENCE: 5
125 attcgagaaa tggagagaat ataatatg                             28
127 <210> SEQ ID NO: 6
```

RAW SEQUENCE LISTING                    DATE: 01/13/2005
PATENT APPLICATION:  US/10/520,220      TIME: 17:13:29

Input Set : A:\seqlist.txt
Output Set: N:\CRF4\01132005\J520220.raw

```
128 <211> LENGTH: 13
129 <212> TYPE: DNA
130 <213> ORGANISM: Artificial Sequence
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
134       binding site
136 <400> SEQUENCE: 6
137 agaaaggagg tga                                              13
139 <210> SEQ ID NO: 7
140 <211> LENGTH: 23
141 <212> TYPE: DNA
142 <213> ORGANISM: Artificial Sequence
144 <220> FEATURE:
145 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
146       binding site
148 <220> FEATURE:
149 <221> NAME/KEY: misc_feature
150 <222> LOCATION: 17, 18, 19, 20
151 <223> OTHER INFORMATION: n = a, t, c, or g
153 <400> SEQUENCE: 7
```
W--> 154 ttaagaaagg aggtgannnn atg                                  23
```
156 <210> SEQ ID NO: 8
157 <211> LENGTH: 23
158 <212> TYPE: DNA
159 <213> ORGANISM: Artificial Sequence
161 <220> FEATURE:
162 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
163       binding site
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: 16, 17, 18, 19, 20
168 <223> OTHER INFORMATION: n = a, c, t, or g
170 <400> SEQUENCE: 8
```
W--> 171 ttagaaagga ggtgannnnn atg                                  23
```
173 <210> SEQ ID NO: 9
174 <211> LENGTH: 23
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
180       binding site
182 <220> FEATURE:
183 <221> NAME/KEY: misc_feature
184 <222> LOCATION: 14, 15, 16, 17, 18, 19, 20
185 <223> OTHER INFORMATION: n = a, c, t, or g
187 <400> SEQUENCE: 9
```
W--> 188 agaaaggagg tgannnnnnn atg                                  23
```
190 <210> SEQ ID NO: 10
191 <211> LENGTH: 22
```

```
192 <212> TYPE: DNA
193 <213> ORGANISM: Artificial Sequence
195 <220> FEATURE:
196 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
197       binding site
199 <220> FEATURE:
200 <221> NAME/KEY: misc_feature
201 <222> LOCATION: 14, 15, 16, 17, 18, 19
202 <223> OTHER INFORMATION: n = a, c, t, or g
204 <400> SEQUENCE: 10
```

W--> `205 agaaaggagg tgannnnnna tg`                      22

```
207 <210> SEQ ID NO: 11
208 <211> LENGTH: 25
209 <212> TYPE: DNA
210 <213> ORGANISM: Artificial Sequence
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
214       binding site
216 <400> SEQUENCE: 11
217 ccctctagaa ggaggagaaa acatg                                     25
219 <210> SEQ ID NO: 12
220 <211> LENGTH: 24
221 <212> TYPE: DNA
222 <213> ORGANISM: Artificial Sequence
224 <220> FEATURE:
225 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
226       binding site
228 <400> SEQUENCE: 12
229 ccctctagag gaggagaaaa catg                                      24
231 <210> SEQ ID NO: 13
232 <211> LENGTH: 23
233 <212> TYPE: DNA
234 <213> ORGANISM: Artificial Sequence
236 <220> FEATURE:
237 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
238       binding site
240 <400> SEQUENCE: 13
241 ttagaaagga ggatttaaat atg                                       23
243 <210> SEQ ID NO: 14
244 <211> LENGTH: 23
245 <212> TYPE: DNA
246 <213> ORGANISM: Artificial Sequence
248 <220> FEATURE:
249 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
250       binding site
252 <400> SEQUENCE: 14
253 ttagaaagga ggtttaatta atg                                       23
255 <210> SEQ ID NO: 15
256 <211> LENGTH: 23
```

```
257 <212> TYPE: DNA
258 <213> ORGANISM: Artificial Sequence
260 <220> FEATURE:
261 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
262      binding site
264 <400> SEQUENCE: 15
265 ttagaaagga ggtgatttaa atg                                      23
267 <210> SEQ ID NO: 16
268 <211> LENGTH: 23
269 <212> TYPE: DNA
270 <213> ORGANISM: Artificial Sequence
272 <220> FEATURE:
273 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
274      binding site
276 <400> SEQUENCE: 16
277 ttagaaagga ggtgtttaaa atg                                      23
279 <210> SEQ ID NO: 17
280 <211> LENGTH: 28
281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
286      binding site
288 <400> SEQUENCE: 17
289 attcgagaaa ggaggtgaat ataatatg                                 28
291 <210> SEQ ID NO: 18
292 <211> LENGTH: 27
293 <212> TYPE: DNA
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
298      binding site
300 <400> SEQUENCE: 18
301 attcgagaaa ggaggtgaat aataatg                                  27
303 <210> SEQ ID NO: 19
304 <211> LENGTH: 28
305 <212> TYPE: DNA
306 <213> ORGANISM: Artificial Sequence
308 <220> FEATURE:
309 <223> OTHER INFORMATION: Description of Artificial Sequence:ribosome
310      binding site
312 <400> SEQUENCE: 19
313 attcgtagaa aggaggtgaa ttaatatg                                 28
315 <210> SEQ ID NO: 20
316 <211> LENGTH: 51
317 <212> TYPE: DNA
318 <213> ORGANISM: Artificial Sequence
320 <220> FEATURE:
321 <223> OTHER INFORMATION: Description of Artificial Sequence:5' PCR primer
```

**RAW SEQUENCE LISTING ERROR SUMMARY**    DATE: 01/13/2005
PATENT APPLICATION:  US/10/520,220    TIME: 17:13:30

Input Set : **A:\seqlist.txt**
Output Set: **N:\CRF4\01132005\J520220.raw**

**Please Note:**
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:7; N Pos. 17,18,19,20
Seq#:8; N Pos. 16,17,18,19,20
Seq#:9; N Pos. 14,15,16,17,18,19,20
Seq#:10; N Pos. 14,15,16,17,18,19

**VERIFICATION SUMMARY**            DATE: 01/13/2005
PATENT APPLICATION:  US/10/520,220    TIME: 17:13:30

Input Set : **A:\seqlist.txt**
Output Set: **N:\CRF4\01132005\J520220.raw**

```
L:13  M:270 C: Current Application Number differs, Replaced Current Application No
L:13  M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:154 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:171 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:188 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:205 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:324 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20
L:336 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:21
L:348 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22
L:360 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:23
L:372 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:24
L:518 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:25
```